

For its quantum computer, Quandela is teaming up with CEA-Leti to develop a very high-performance photonic chip

Paris, 10 October 2022 – The French start-up Quandela has signed a partnership with the Electronics and Information Technology Laboratory of the French Atomic Energy Commission (CEA-Leti) to produce a 100% French high-performance photonic chip. As part of this partnership, CEA-Leti is making its expertise and manufacturing platform available to Quandela. The first chips will be available in early 2023.

This partnership will allow Quandela to fully control the process of creating these photonic chips.

Quandela also contributes to France's and Europe's need for technological independence: this 100% French-made chip secures the supply of photonic quantum players and allows French sovereignty to emerge in this field.

Quandela's photonic technology has many advantages over other quantum technologies, as photons are not sensitive to perturbations in their environment, allowing photonic processors to operate largely at room temperature. In addition, the quality of the single-photon source developed by Quandela makes it possible to remove the theoretical barriers to the development of fault-tolerant quantum computers. CEA-Leti is now the best partner to work on the development of photonic chips with a performance adapted to this new step taken by Quandela.

“This partnership with the CEA-Leti teams, undoubtedly among the best experts in photonic chip design and manufacturing, allows us to take a new step in the mid-term development of Quandela's full-stack photonic quantum computer and, in the longer term, of a fault-tolerant quantum computer” **explains Niccolo Somaschi, co-founder of Quandela.**

About Quandela

Quandela, leader in quantum photonics, is developing a complete optical quantum computer.

Founded in 2017, the company raised its first round of funding in 2020, followed by a second round in 2021 of €15M from deeptech investment fund Omnes, Fonds Innovation Défense and quantum technology fund Quantonation, enabling it to significantly strengthen its R&D teams.

Quandela is a complete player in photonic quantum computing, with more than 40 PhDs and engineers in algorithms, semiconductors, quantum optics, quantum information and computing.

In 2022, Quandela released its photonic computer programming and simulation software, Perceval, and signed a hosting partnership with OVHcloud to strengthen the user community. Today, the company offers a cybersecurity enhancement solution with a 2-qubit processor and will make its first 6-qubit NISQ quantum computer available in the cloud in the fall of 2022. Quandela also assists and advises companies, such as EDF and MBDA, in the exploration and development of the first use cases.